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CASES OF UTERINE DISEASE.

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CASE I.—June 2d, 1864. Miss ——, æt. 21. She considers herself of good constitution naturally. She has been a teacher in a Boston grammar school for several years; has been very ambitious to take high classes, and to bring her pupils up to a high standard of excellence. She also applied herself very closely as a pupil, so that her mind has been in a state of tension for the last eleven years. About a year since, she took cold at a monthly period, the flow of blood being interrupted, and hysteria setting in. She has never been so well since.

On Christmas day she skated to excess, the menstruation being then present.

The following symptoms have been gradually increasing upon her, viz.:—hysteria, in the form of laughing and crying without sufficient cause; vigilance; menorrhagia, without, however, irregularity of the periods; stricture at the præcordia; backache; pain in the groins; sense of sinking and dragging in the pelvis, to the extent that she has worn a supporter. She has lost flesh and appetite; and there is general debility, so great that she has given up school and taken mostly to her chamber, depressed in body and mind. In short, she is broken down, being now disinclined to any effort, even that of receiving her friends. The skin is of a waxen cast, even to the hands. The bowels are costive.

By digital examination, it was ascertained that, with a small vagina, admitting only a small-sized virgin speculum, the uterus was enlarged and tender; the cervix lengthened.

The speculum showed the neck bathed in leucorrhœa, red and swollen, as if from congestion. The os was directed backwards, so that it could not be brought into the field of the speculum.

Nitrate of silver was applied. The cervix was scarified, with the

discharge of a moderate quantity of blood. The patient was directed to regulate the bowels with laxative diet.

June 4th.—I was called to see the patient on account of flowing, which had set in, causing some alarm, though it was less in quantity than that which has been usual at the menstrual epoch for some time past. I referred it to the operative interference.

7th.—The symptoms are slightly mitigated, the sanguineous discharge having ceased. The uterus looks pale. It was lanced, with a moderate flow of blood. Nitrate of silver was freely applied.

17th.—An issue was made upon the anterior lip of the cervix with a cylinder of potassa cum calce.

24th.—The patient feels somewhat better, and has gained flesh. The eschar from the potassa cum calce has disappeared, leaving the appearance of an abrasion. A fresh issue was made with the potassa cum calce, and nitrate of silver was also applied.

July 1st.—During the last week, the general symptoms have further improved, and to a more marked degree than previously. The hysteria, particularly, has lessened. The anterior lip of the uterus is seen to be honey-combed, and reddened at the seat of the issue. The cervix is, however, smaller, and, for the first time, I am able to see the os uteri, which is not abnormal in appearance.

7th.—The patient feels better in every way. An issue was made as before, and nitrate of silver was applied.

15th.—She has had an attack of diarrhœa, with nervous symptoms. Both are now better. The eschar from the last issue is fresh and bright. Nitrate of silver was applied.

22d.—There has been another attack of diarrhœa, producing some weakness. It was controlled by astringents and opiates. The last eschar is not yet healed. Nitrate of silver was applied. The patient is to make a visit of some weeks in the country, and to take tincture of muriate of iron daily.

Sept. 20th.—The patient has returned from the country. The strength and flesh have improved, and the symptoms generally. A short walk, however, still tries her, and she has her days of despondency. The body of the uterus is presumed to be no longer enlarged, as no portion of it can now be distinctly reached. The cervix is smaller, but bathed in leucorrhœa. The os is well in sight, and natural. A slight abrasion is seen. Nitrate of silver was applied to the cervix and inserted into the os. The iron is to be omitted, and replaced by the following prescription:—℞. Tr. gentian comp., ʒ i.; alcohol, ʒ iij. M. Dose, one tablespoonful twice a day, to be well diluted with water. The object of the dilute alcohol was to afford an active stimulant, which would not act as an astringent, as brandy; or as a laxative, as does sometimes whiskey.

28th.—The symptoms improve. The uterus is almost healthy, except in the size of the cervix. Nitrate of silver was inserted into the os and applied to the cervix.

Oct. 8th.—There being an improvement in the spirits and strength, the medicine is omitted, to give place to the iron, the use of which I wish to persevere in. Nitrate of silver was used as before.

14th.—She bears the iron well. There is a decided gain in flesh and spirits. Nitrate of silver as before.

Oct. 21st.—The patient is about the same. About this time the patient commenced the use of whiskey on going to bed. Nitrate as before.

Nov. 4th, 11th, 21st, the patient was steadily improving. Nitrate of silver was used at each date.

Dec. 5th.—She has been less well for a day or two, perhaps in consequence of fatigue. She has exerted herself a good deal for a week past. She rallies, however, from prostration more readily than she used to. The cervix is noticed to be shorter. Nitrate of silver.

Dec. 20th.—Miss —— began teaching again yesterday. She is much prostrated by it. She has had an increase of leucorrhœa for a week past, and has not been quite as well generally. She says teaching excites and exhausts her. I find some increase in the fulness and redness of the cervix. I used the nitrate of silver, and ordered alum injections.

Jan. 4th, 1865.—The patient feels better, but is still much prostrated by teaching. The increased fulness of the cervix remains, with, however, less redness. I applied potassa cum calce and nitrate of silver.

11th.—The patient is improving again. There is less fulness of the cervix. The eschar made by the potassa cum calce is quite marked. Nitrate of silver was applied.

18th.—She volunteers to say she is decidedly better. Teaching begins to wear upon her less. The uterus appears in every way better. The eschar is still distinctly visible.

28th.—She is improving. The cervix uteri not diminishing in size as rapidly as I could wish, and the last issue having healed, I apply potassa cum calce.

Feb. 8th.—She is steadily improving in all respects. The eschar of the last issue is of the size of a dime, nearly, and is distinct. Nitrate of silver was applied.

15th.—There remains an abrasion at the seat of the eschar produced by the potassa cum calce. There has been rather more leucorrhœa for a few days. The cervix is not quite as small as I could wish, but I expect to be able to discontinue all treatment in a short time. The patient has taken a lower class to teach than formerly, and carries off her labors quite lightly. She sleeps generally well; she is in good *embonpoint*. Her strength is gaining daily. The waxen hue is gone, and is replaced by a decidedly ruddy color. In a word, she is in advanced convalescence.

March 1st.—Made my last visit, recommending the continuance of the iron some time longer.

My theory of the case is this:—There was, first, to use Marshall Hall's term, great "disorder of the general health," including impairment of the digestive, and perversion of the nervous functions; secondly, a local lesion—viz., congestion with hypertrophy of the uterus. The former I attribute to long-continued tension of mind and application to arduous duties; and I think it was in turn the predisposing cause of the second phase of the case—the local lesion, the exciting causes of which were very probably the interrupted menstruation and certain imprudencies.

Case II.—April 25th, 1864. Miss ——, æt. about 31. Has been under my care at various times for the last eight or ten years for attacks of subacute pharyngitis. From the aspect of the patient and the symptoms presently to be described, I infer a cachectic state of the system. The throat affection has been helped, and sometimes relieved, by applications of solutions of nitrate of silver. But iron, tonics and other drugs have been tried, without effect on the general health. It should be mentioned that there has been, at times, much swelling of the tongue, and that the patient thinks she took a good deal of mercury, while under the care of another practitioner, during a fever some years ago.

Some four years ago, swelling and hardening of the right breast set in to a marked degree, leading to fear on the part of the patient of cancer. The swelling was aggravated at the menstrual epochs. Freedom from adhesion and other considerations led to a diagnosis that the tumor is benign, and the stationary and perhaps retrograde course of the affection has confirmed that opinion. The left breast subsequently became affected in the same way, though to a less extent.

This lesion led to inquiry as to the state of the womb, and it was finally acknowledged, some three years since, that there were uterine symptoms, but the patient did not submit to a vaginal examination till this date. The symptoms now are—costiveness; anorexia; loss of strength and flesh; great nervous irritability; hypochondriasis; palpitations; stricture at the præcordia; mammary enlargement and hardening; pain in the back and groins; sense of emptiness and dragging down in the abdomen; painful micturition. The menses are regular in periodicity, rather large in quantity, but are preceded by about five days of extreme general *malaise* and prostration. During these five days the patient has a peculiar pinched expression of countenance, and there is also a slight bloody discharge from the vagina. The patient is cognizant of this discharge being replaced by the regular menstrual flux, through the onset of a day's severe pain and sudden increase of the flow. During the inter-menstrual period there is leucorrhœa. In sum, the patient is weak, wan and miserable.

Now, April 25th, 1864, an examination being made, the index finger passing the hymen with some difficulty, finds the uterus enlarged, especially at the body, which is nearly or quite twice its natural size. Both the body and cervix are very much hardened. The speculum showed leucorrhœa, and the cervix reddened as if from congestion.

The treatment subsequently was chiefly by caustics—nitrate of silver and potassa cum calce. But, on the 16th of May, the third visit, a leech was applied to the cervix, the bite bleeding profusely—more so than I ever knew from the unimpregnated uterus.

On the fifth visit, May 23d, the patient volunteers gratefully to report a marked improvement in all the symptoms. Her friends notice also a decided change for the better in her aspect. The usual five days of misery before the menses set in have been changed to days of comparative comfort.

July 13th, the tenth visit, the report is, that the uterus is in all parts smaller. Where distinctly felt, as at the cervix and a little above, it is softer.

The patient's symptoms improved till Sept. 1st, since when they have been stationary—her present condition being as follows, viz.: January 1st, 1865—The leucorrhœa is much diminished. The five days of distress before the monthly period have been nearly abolished. Flesh and strength have improved, as also the digestive symptoms. The nervous symptoms are better—the sleep generally good. The patient's spirits are much improved, and she feels altogether a different person from what she was before the treatment was begun. Still, she is far from strong, or free from "nervousness." She has not been "made over again." The cachexia is there still.

Locally, the womb is of natural color. The hardening is nearly or quite gone. The hypertrophy of the cervix is pretty much removed; that of the body reduced at least four fifths.

The patient makes special mention of the improvement which followed the leeching in her case.

I would add that she has been unusually free this winter from the affection of the throat to which she has been a prey for years.

The local lesion in this case seems to have been made up of congestion and hypertrophy. The congestion seems to have been pretty much removed, and along with it, to a degree, the symptoms. The hypertrophy has not entirely gone; and I find this lesion exceedingly difficult to disperse, especially when of long standing. I know of no better treatment for it than the making of issues on the cervix with potash, or potash with lime. Some years ago, Dr. Oldham, of London, wrote of having met with success in the treatment of "congestion with hypertrophy," by administering for a long time the bichloride of mercury, but I have never tried this remedy.

This case contrasts with the preceding one in its longer standing before the commencement of treatment; in the greater and more

solid hypertrophy; and in the cachectic state of the system, with which the uterine affection co-existed. Hence, probably, the more decided result in the former than in the latter.

CORK AND ITS USES.

By John R. Jackson.

Amongst the many materials or productions in use in every-day life, cork may certainly take a position in the foremost rank. We all know something of cork; from our earliest childhood we have been familiar with it. It is a substance that has retained all its ancient uses, as well as its importance and value, from its earliest history down to our own day. Unlike most other things, it has not, even in this age of application and invention, found a rival. True it is we have "corky" substances in abundance, produced in almost every country; but neither the productions of nature nor the productions of mechanical skill have produced an efficient substitute for cork, one that could take the place of this valuable bark, or even go side by side with it.

Considering the great quantity of cork that is consumed even in this country alone, as well as the great amount that is wasted, the quantity of bark annually stripped in the cork forests is an operation of no little importance. The slight value many individuals place upon cork, on the whole, does not lead us in the least degree to estimate its real importance, which, in a commercial point of view, is of no trifling nature.

There must needs be a large quantity imported; for amongst wine merchants, bottled-beer merchants, or soda-water makers, a cork is never used a second time; but then what an immense bulk would go to make up a ton of cork, and yet it is by weight that the imports are estimated. There is an immense consumption, and the demand of late years has almost exceeded the supply. The annual quantity imported into this country averages about 5000 tons.

Of the early history of cork, it is very clear that it was well known and in use amongst the Greeks and Romans. Theophrastus distinctly alludes to the fact, now so well known, that the continual barking of the trees tends to improve the quality of the cork. With the Greeks it was called "Phenos," while the Romans knew it by its present specific name of "Suber." Though cork was probably used in very remote times for similar purposes to those of the present day—that of stoppers for bottles amongst the rest—this, however, does not seem to have been its common or general use, inasmuch as we find that vessels of that period were frequently closed by earth, clay, and other similar substances. Stoppers of cork, or "corks," as we now call them, appear not to have been generally introduced till some time in the latter part of the sixteenth century;

from that period, however, its use has been getting more and more universal in all parts of the world.

Before the introduction of cork, or its general adoption for bottle stoppers, various articles were resorted to for this purpose. We are told that apothecaries secured the contents of their vials with stoppers made of wax, which must have been a somewhat tedious process. But even in our own day, a similar custom prevails in many parts of Europe; for with many of the Italians and Neapolitans, for instance, the practice of securing their wine, by pouring oil into the mouth of the bottle before tying it down with skin, is still very prevalent.

Before entering into the uses of cork, however, let us pay a short visit to the forests from which it is obtained, and trace its progress from its natural position to that of its ultimate application.

Cork, as we all know, is the bark of a tree, though commercially miscalled "cork-wood." It is produced by two species of oak, *Quercus suber*, L., and *Quercus occidentalis*, hence called the "cork oaks." These trees grow abundantly in large forests in Spain, Italy, the South of France, and Northern Africa, the latter species being found alone on the Atlantic side. This species is also peculiar, from the fact that it ripens its acorns in the second year.

In general appearance the cork-oaks differ little from the common oak, except, perhaps, that they do not attain to so large a size. There is also a slight difference in the form of their leaves—those of *Quercus suber*, L., being more lanceolate, and the margins not so deeply sinuate; the acorns are also somewhat longer and more tapering in form than those of the common oak.

The cork-oak does not require a rich soil; but, on the contrary, it seems to thrive best in poor and uncultivated ground. To collect the cork, incisions are made longitudinally and transversely in the bark of the living tree, the instrument used being a kind of axe, the handle of which terminates in a wedge-shaped form. After the bark is cut through, it is beaten to loosen it from the liber or inner bark, the wedge-shaped axe-handle being inserted to lift the bark from the trunk. The cork thus removed usually varies from three quarters of an inch to three inches in thickness. The next operation is to divide it into pieces of a uniform or convenient size, and to flatten it, each piece having, of course, a similar curve, corresponding with the trunk of the tree from whence it was taken. For this purpose, the pieces are placed in pits and covered with water, and then pressed flat with heavy stones. The well-known charred surface upon these cork slates is caused by the application of heat at an open fire, after the steeping, for the purpose of contracting the pores. The pieces are afterwards bound up in bales, in which form they appear in the market. In removing the cork from its paternal trunk, care has to be taken not to injure the inner bark next the wood, else it would affect the second crop of bark, and perhaps in-

jure the tree. This operation of stripping the bark, if dexterously and carefully performed, has, as we have already said, no detrimental effect, either upon the growth of the tree or the rapid formation of the new bark; but, on the contrary, the tree is said to grow more hardy and vigorous. The first crop of bark is usually taken when the tree is about twenty-five or thirty years old, but the crop is of less value than that of any succeeding gathering, as it is harder, very uneven, and more full of holes. The second gathering, however, which is in about eight or ten years after the first, is still of an inferior quality. The third crop, collected in about eight years after the second, is usually the first marketable crop—that is, the first crop that is fit for cutting into bottle-corks. When the trees have attained to this age, so that three crops have been taken off, they usually yield a supply of good cork about every seven or eight years; and its quality improves, as well as the quantity enlarging, at each successive gathering. The season chosen for the cork harvest is usually the months of July or August.

It will be seen by the foregoing that the quality, and consequently the commercial value of cork is materially affected by soil, length of time allowed in growing, and also of care in collecting. There is as much difference existing in the quality of cork as in most other articles of daily use. The finest kind should be compact and firm, but at the same time not hard, of an even texture or grain, and of a slightly pinkish tint. This kind of cork is generally selected by wine merchants for bottling-corks; while the coarser kind, which is always more porous, full of small holes, and perhaps punctured by insects, serves for bungs for casks and for the various other applications to which cork is put in a cheap form. When cork is required to be thick, it is usually found coarse, as it must be allowed a longer period of growth to promote its thickness. The charring or singeing process to which this kind of bark is frequently subjected, for the purpose of filling up the pores and making it impervious to fluids, has also a detrimental effect, as it secretes an empyreumatic oil, which is given off and frequently taken up by the liquids it confines; but there is no doubt that care is taken in the selection of these corks, and methods adopted for the prevention of this chemical contamination, as much as possible. This operation of charring, to which all cork was formerly subjected for the purposes we have just mentioned, has been partially succeeded of late by that of boiling the cork and afterwards scraping the surface. This is said to improve rather than deteriorate the cork, in being more effectual in filling up the pores.

The uses of cork are so numerous, and its applications so continually increasing, that the supply of late, as we have said before, has not been sufficient to meet the demand. It is not our intention to enumerate all the uses to which this most useful article is put—indeed, it would be unnecessary to do so, so well known as they are

to all; but there are a few modern uses or applications to which cork has been found suited in recent inventions, and which are, perhaps, among the "things not generally known;" but these uses chiefly consume waste or refuse cork, such cuttings as were formerly considered of no value.

The new elastic floor-cloth, now so well known as "Kamptulicon," is a combination of caoutchouc and cork; and this is but one instance showing that cork, treated with other substances, can be made into a really useful article. Cork-dust has been used successfully with india-rubber in the process of vulcanizing, and to so fine a powder is it reduced for this purpose, that india-rubber so treated is capable of being moulded into the most delicate forms. Another recent application of cork is for stuffing beds, and we believe this is now done to a large extent.

A large cork company, lately established in London, and owning large forests in Portugal, have recently imported the virgin cork into this country, with the impression of its being useful for rustic garden-work. It is brought in very large pieces, and, from its rugged, uneven surface, which is frequently covered with lichens, together with its portability and its porous nature, which makes it capable of retaining moisture, will no doubt cause it to be used for such purposes.

Though the bark of the cork-tree contains a considerable amount of tannin, it is not in general favor among tanners, on account of its not imparting the required "bloom;" and for this reason it is seldom used alone, but is mixed with English oak bark. The inner bark is that which is used for tanning purposes, the outer bark being quite devoid of any of the required properties. The removal of the inner bark causes the death of the tree; and it is chiefly from Sardinia and some parts of Spain, where the trees are very abundant, that it is imported for this purpose. The quantity of tannin, as well as the color of the bark, varies much, according to the district from whence it is obtained. The Sardinian bark is thicker and of a deeper red color than any other.

To return to cork itself and its more common applications, we find that there are two sorts or qualities known in commerce, called respectively white and black cork. The white, which is chiefly produced in the south of France, is the best, as it is smoother, of a more even and finer grain, and freer from holes and knots.

The operation of cork-cutting is one requiring great dexterity and neatness, and is carried on to a great extent both in France and England, though, as might be supposed, the French surpass the English in this art. Machinery has been tried for the purpose of cork-cutting, but all is now cut by hand. Considering the difficulty, with which we are all acquainted, of cutting a clean surface to cork, it is surprising to see the rapidity with which the workman turns out a perfect cork stopper from the square pieces furnished to him. The

knife used for this purpose has necessarily to be very sharp, as well as being very thin; the blade is broad, and when the edge has become dull, it is quickly sharpened on a very fine-grained stone. The bench or tube at which the workman sits has a ledge round it to prevent the corks falling off. On the Continent, a notch is made in the edge of the bench to place the back of the knife in, to prevent it from slipping. Thus the edge is uppermost, and the knife has to be guided slightly while the cork is pressed against the edge, and so dexterously turned and rounded to the required form. All the corks thus cut are thrown into a basket to be sorted, which is usually done by women and boys.

The great importance of cork as a commercial article has been the cause of experiments being tried for its introduction into the Southern States of North America. It is, however, some years since the American government tried this plan of naturalization, for which purpose large quantities of the acorns were imported from the south of Europe. More recently, we learn, from Sir J. W. Hooker's last Report on the Royal Gardens, Kew, that steps are now being taken by the Colonial government of South Australia to introduce the cork-tree, and a number of young plants have been raised at Kew expressly for transmission to that colony.

We sincerely hope that these efforts to establish a tree furnishing so useful a product as cork, in a colony where it would become a valuable addition to its commerce, as well as adding to the supply, which, at the present increasing rate of consumption, is much to be desired, may be crowned with success.—*American Druggists' Circular*, from *The Technologist.*

THE PRESERVATION OF FOOD.

The superior power and endurance of British laborers over those of other countries is generally admitted. The larger amount of animal food our people consume than do the inhabitants of the Continent is as frankly conceded. John Bull must have his beef and mutton very often, or he becomes desponding and cantankerous. Give him plenty to eat, and he will work for you with as hearty a relish and with as good effects as those associated with his dinner. Starve him, feed him on sauer-kraut, salad, and bread and butter, and he is not worth the salt to his porridge. If Britons are to keep up their reputation for downright hard physical exertion, it becomes a matter of necessity that some method should be adopted by which a sure supply of comparatively cheap animal food may be placed at their disposal. At present we know that the supply is quite incommensurate with the demand, and that a frequent meal of animal food is becoming to a great body of our people every day less and less procurable. Mr. Herbert, in a paper read before the British Asso-

ciation at Bath, last September, observed:—"The rapid increase of the population of Great Britain during the last ten years, and the consequent increase in the consuming powers, added to the extraordinary progress of trade and commerce and the improved monetary position of the great mass of meat-consumers, prove beyond a doubt that the period has now arrived when strenuous efforts are absolutely necessary to meet a demand that must continue to have a most important bearing upon price. At the present time both beef and mutton are selling at full three halfpence per pound above the rate current ten years ago. Prices are still tending upwards, and had it not been for a free importation, nearly all kinds of meat would long ere this have been selling at enormous prices." While in our densely populated towns and districts we can at present scarcely supply sufficient cheap food for the bodily sustenance of our laboring population, who chiefly require animal food, at the same time there exists in other regions of the globe a superabundance of animal food, not only fit for sustenance, but of excellent quality. It is an object, then, worthy of every philanthropist—to say nothing of mercantile interests—to assist in making available the abundance of one part of the earth for the supply of the wants of another part. If our energies of body and mind to be kept going must have proper supplies of aliment, we must seek in other countries for those supplies if our own land will not afford them. The recent correspondence in the public journals connected with the introduction of the South American beef as a means of meeting the deficient supply of fresh food at home, has given an impetus to the very important question—By what means can provisions, when and where in great plenty, be preserved against a season of great dearth or pressing necessity? This question has already occupied attention either as a commercial speculation or as a useful and benevolent object, and many methods for effecting the required ends have been proposed, and several actually practised.

On Wednesday, March 22d, the important subject of "the preservation of food, especially fresh meat, fish, &c., and the best form for import, and provisioning armies, ships, and expeditions," underwent, at the hands of Mr. G. C. Steet, F.R.C.S., a full and interesting exposition before the Society of Arts. The leading features of Mr. Steet's communication were to the effect of classifying the plans already proposed under the following heads:—

First. The means that may well be styled the "ready method," and the plan which has been longest in use, is to prevent decomposition by imbuing the substance to be preserved with some saline matter or preservative agent, whether common salt or compounded brines, and whether the article be simply rubbed, steeped, pickled, or injected according to Payne's, Carson's or Morgan's methods. By the more common plans of "salting," the fluid and more soluble matters contained in flesh are abstracted, and the nutritive qualities of

the latter are considerably injured. "If," says Liebig, "flesh employed as food is again to become flesh in the body, if it is to retain the power of reproducing itself in its original condition, none of the constituents of raw flesh ought to be withdrawn from it during its preparation for food. If its composition be altered in any way, if one of the constituents which belong essentially to its constitution be removed, a corresponding variation must take place in the power of that piece of flesh to reassume in the living body the original form and quality on which its properties in the living organism depend." As Mr. Steet pointedly remarks, "the medical aspect of this subject is full of interest. It is well known that scurvy, debilitation, and fatal disease are brought on by the use of a diet containing but very little potash—a principal base of the salts contained in meat, and which is abstracted largely by the ordinary process of pickling." So full of nutritious matter, indeed, is the brine of meat cured in the ordinary way, that Mr. Whitelaw, of Glasgow, has introduced a process of dialysis for utilizing the fluid in question, by the production from it of a pure fresh extract of meat, procurable at a cheap rate.

The second class of methods is that of *drying*, accomplished by currents of ordinary air either chilled or hot, or by air deprived of moisture by chloride of calcium or by passing over sulphuric acid. In some varieties of this method the meat is afterwards coated over with gelatinous, waxy, or other varnishes.

The third class is that of *cooking* the food to be preserved, either before or after being placed in the vessel containing it. The exact course of procedure followed in effecting the cooking, and the treatment and packing of the food afterwards, vary; but the tin canisters of comestibles which may be seen anywhere, may be taken as samples of this special practice.

A fourth course of conserving meats from decay is that by freezing it and storing it in ice-houses. This method is, however, only practicable under very special circumstances or only in certain climates.

A fifth and last class of processes include those plans which necessitate the total expulsion of all atmospheric oxygen, and at the same time the substitution of a new atmosphere, composed variously of preservative gases, of course to the total exclusion of free oxygen. According to Mr. Steet, here are to be found the more important of all preserving methods. After several schemes and various compositions of gases had been tried, Messrs. Jones and Trevethick introduced a plan of—

"1st, exhausting all, or very nearly all, the air from the chamber in which the meat to be preserved was placed; 2ndly, supplying the place of the air by pure nitrogen gas to nearly the capacity of the canister; and, 3rdly, injecting a small measure of sulphurous acid gas. The *rationale* of this process consisted in getting rid of the oxygen by exhaustion to as great an extent as possible, and neutral-

ing any that might remain either in the case, in the bone, or other tissues of the meat. This is certainly a purely rational system of procedure, and only requires the proof of experience to mark it as excelling most, if not all, others; for it must, I think, recommend itself to all of us in that, if successful, it preserves to our use the meat, &c., in that fresh raw state most suitable for after-cooking in any way that may be deemed most desirable. It gives us also an opportunity of ascertaining the quality of the meat preserved. This none of the cooking processes can well accomplish. You may recollect in the Exhibition of 1862 there were some specimens under the title of 'Azotised raw meat'—of fresh meat, salmon, &c., put up in glass cases; and I can well remember how anxiously I watched them from time to time to see how the samples would bear the severe test of exposure to the heated atmosphere and sometimes the sun's rays in that building. Not one example failed."

Since 1862, however, certain improvements in the preserving matters used, or in their application, have been effected, and which were fully illustrated by Mr. Steet.

In describing these latter improvements, the process might appear tedious as well as somewhat uncertain; but according to the gentleman in question in actual practice it is not so, but is carried out with the greatest facility, and is the one above all others capable of the greatest despatch.

"The cost of the materials is very slight, and the expense of necessary preparation certainly not greater than that of the cooked meat plan, while there is no necessity for furnace, steam heat, or engine. As may be well seen by the beautiful specimen (a head of cauliflower in a glass case) on the table, vegetables may be preserved whole, fresh, and in their natural condition, without the slightest sign of decay, and with all the color and freshness of a recent sample purchased in the market. The specimens of meat, consisting of a section of beef, mutton chop, &c., all under glass shades, give undoubted demonstration that this proceeding is certainly most efficient. The lean is unchanged in color and consistence; the fat is free from change, there is no appearance of rancidity or formation of adipocire; and they look as if just cut from the joint."

We are informed that some such plan of preservation as the above is about to be carried out by a company, which will have factories abroad and wholesale and retail houses at home. It will purchase the cattle, pigs, poultry, fish, game, &c., at first hand, then slaughter and dress the meat, and after preserving the finer pieces by the raw meat process, will put up the remainder by the cooking method. This will ensure all portions used not only to be fresh and free from taint, but to be obtained from healthy animals, therefore more fit for human food and calculated to convey into the system the largest relative amount of nutritive material.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 10, 1865.

TRIAL OF DR. PRITCHARD.—The recent trial of this surgeon, in Edinburgh, for the murder of his wife and Mrs. Taylor, his mother-in-law, by poison, which resulted in his conviction and subsequent execution, brought out several points of unusual interest, one of which has been the occasion of much comment by the public press. Dr. Pritchard had been for several years connected with the British Navy, from which he had received an honorable discharge, and had only recently entered upon civil practice at Glasgow. His wife's illness began in October, and continued until March, when she died, and her husband represented to the registrar that the cause of death was gastric fever. While she was sick a Dr. Paterson was called by him in consultation, who suspected antimony to be the cause of the symptoms, and prescribed accordingly. His suspicion of poisoning was so strong that he consulted with other physicians in Glasgow, who agreed with him that further interference in the case would be improper. After the death of Mrs. Taylor, which took place in February, he refused to certify to its cause in the following letter to the registrar, and it was this letter which led to the subsequent legal investigations :—

"Dear Sir,—I am surprised that I am called on to certify *the cause of death* in this case. I only saw the person for a few minutes, and a very short period before her death. She seemed to be under some narcotic; but Dr. Pritchard, who was present from the first moment of the illness till death occurred, and which had been in his own house, may certify the cause. The death was certainly sudden, unexpected, and to me mysterious."

The reasons assigned by Dr. Paterson for his conduct in this case will be found in his testimony before the court, which follows :—

"In cross-examination, witness stated that it was his impression on seeing Mrs. Pritchard that she was poisoned, or being poisoned, with antimony. He did not go back to see her, because she was not his patient. He had nothing to do with her. It was not his duty to do so.

"You saw a person being poisoned with antimony, and you did not think it was your duty to interfere? I did the best I could to prevent her being further injured, by apprising the registrar of the fact.

"Did you tell Dr. Pritchard? I did not.

"You were surely under an obligation to go back again when you saw a person being poisoned by antimony? I took what steps I could to prevent any further administration of the drug. I refused to certify the death of Mrs. Taylor, and if there had been a *post-mortem* examination of Mrs. Taylor's body I believe that the drugging with antimony would have gone no further at that time. I observed that she was suffering under the same symptoms as those formerly observed when I was called in on the 2d of March. I still believed her to be suffering under antimony, and prescribed for her accordingly. I saw her alone, but did not mention antimony to her in the slightest. The

treatment I prescribed for her, provided she got nothing else, was quite sufficient to have brought her very soon round, taking it for granted that my prescriptions were carefully walked up to, or rather my advice. It was Dr. Pritchard who asked me to visit his wife on the occasion. I did not mention to him what I thought. It would not have been a very safe matter to have done so. I did not go back, because it was none of my business. I did not consider it my duty. She had her husband, who was a medical man. I had discharged my duty.

"By prescribing certain things, and not going to see that your prescription was followed? In the case of a consultation the consultant has no right to go back.

"The dignity of your profession, then, prevented you? The etiquette of the profession."

The action of Dr. Paterson in this matter, as may be supposed, has been the subject of much severe criticism in and outside of the profession, as well as of much unjust remark on the part of the public press. It certainly is unaccountable when judged by his own testimony, and perfectly unjustifiable by any rules of professional etiquette or decorum. If he suspected Dr. Pritchard to be the guilty party, the treatment which he advised as quite "sufficient to bring her round" was, as he well knew, the merest farce, for it would never be followed; if he did not suspect him, then there was every reason why he should have mentioned to him what he thought. It is true that it was not his business, and might not have been a safe matter to accuse Dr. Pritchard at the visit of attempting to murder his wife, but it certainly was his duty to state his belief without reference to persons, if he was so strongly convinced of its correctness, as he says he was. This is the error for which Dr. Paterson should be held accountable. The English papers, however, have put a different construction upon his conduct, which they attribute to a desire to screen a member of the profession from suspicion, "lest undue discredit should be brought upon the faculty;" conduct which, the *Times* remarks, "is not so wholly unlike what is done every day by respectable medical men as we could desire."

The scientific evidence in this case, which we extract from the *Chemist and Druggist*, will be found of unusual interest. The criminal administration of antimony, of which there can be no doubt, although the immediate cause of death in both instances will always remain a matter of uncertainty, is rare in the records of medical jurisprudence. Of 280 cases of poisoning tabulated by Briand and Chaudé, this substance was employed but twice.

"Dr. Douglas Maclagan, the learned Professor of Medical Jurisprudence at the University of Edinburgh, and Dr. Littlejohn, made a *post-mortem* examination of the body of Mrs. Pritchard, and reported that it presented no appearance of morbid action capable of accounting for death. Subsequently Dr. Maclagan, with the assistance of Dr. Littlejohn and Dr. Arthur Gamgee, made a chemical examination of the body, and obtained unmistakable evidence of the presence of antimony in the contents of the intestines, in the bile of the gall-bladder, in the blood, and in the liver. He also detected the poison in the deceased's urine, and in some stains on her linen. The processes of

Reinsch and Marsh were employed to ascertain the presence of antimony, and in some cases quantitative determinations were made by weighing the sulphide precipitated by sulphuretted hydrogen. The amount of sulphide obtained from seven ounces of urine corresponded to nearly one fourth of a grain of tartar emetic; that from four drachms of the bile, to more than one tenth of a grain; and that from a portion of the liver weighing less than four ounces, to one quarter of a grain of tartar emetic. The fact that the antimonial compound found in the intestines was soluble in water convinced Dr. Maclagan that it was the tartrate of antimony and potash, that is, tartar emetic, as the only other commercial preparation of antimony soluble in water is the chloride, a dark-brown, corrosive fluid, totally unsuited for internal administration. The results of the chemical investigation led Dr. Maclagan to the following conclusions:—

"'1. That Mrs. Pritchard had taken a large quantity of antimony in the form of tartar emetic.

"'2. That, having regard to the absence in her case of any morbid appearances sufficient to account for death, and to the presence in it of a large quantity of a substance known to be capable of destroying life, her death must be ascribed to the action of antimony.

"'3. That it is most unlikely that this poison was taken in a single large dose. Had this been the case, I should have expected to have found some more decided evidence of irritant action in the mouth, throat, or alimentary canal.

"'4. That, from the extent to which the whole organs and fluids of the body were impregnated with it, it must have been taken in repeated doses, the aggregate of which must have amounted to a large quantity.

"'4. That, from the large amount found in the liver, from its ready detection in the blood, and from its being found passing so copiously out of the body by the bile and urine, it is probable that some of the poison had been taken at no greater interval than a period of a few days previous to death.

"'6. That I am inclined to believe that it had not been administered, at all events in any great quantity, within a few hours of her death. Had this been the case, I would have expected to have found at least some traces of it in the contents of the stomach, and more in the contents of the intestines; whereas none was found in the former, and the amount found in the latter seems to be amply accounted for by the bile impregnated with the poison discharged into them from the liver.

"'7. That the period over which the administration had been extended cannot be determined by mere chemical investigation, but must be deduced from the history of the case, with which I am unacquainted.'

"Professor Penny, of Glasgow, made an independent examination of portions of Mrs. Pritchard's body, and discovered antimony in the contents of the intestines, in the liver, kidney, spleen, stomach, rectum, brain and blood. He also detected mercury in the spleen, heart, blood and kidney. He obtained no evidence of the presence of any other metallic poison, or of any organic poison.

"The scientific evidence respecting the poisoning of Mrs. Taylor was equally conclusive. Mrs. Taylor, who came to Glasgow to nurse

her sick daughter, died on February 25. Dr. Paterson was called in shortly before her death, and was informed by Dr. Pritchard that she had been suddenly taken ill while in the act of writing a letter. From the contraction of the pupils, and other symptoms exhibited by the dying lady, Dr. Paterson concluded that she was under the influence of opium or some other powerful narcotic. He declared his opinion to Pritchard, who thereupon stated that the old lady was in the habit of regularly using Battley's sedative solution; that she had a few days before purchased not less than a half-pound bottle of the medicine; and that he had no doubt but it was very likely that she might have taken a good 'swig' of it.

"Dr. Paterson refused to certify the cause of death, and wrote to the registrar, informing him that he considered the case mysterious. Pritchard then sent a certificate to the registrar, attributing the death of his mother-in-law to apoplexy.

"Dr. Maclagan made a most careful examination of the old lady's body, and submitted the principal organs to chemical analysis. The conclusions arrived at by him were:—

"'1. That Mrs. Taylor had taken a considerable quantity of antimony in the form of tartar emetic.

"'2. That, having regard to the absence of any morbid appearances sufficient to account for death, and to the presence in the body of a considerable quantity of a substance known to be capable of destroying life, her death must be ascribed to the action of antimony.

"'3. That it is most likely that this was not taken in a single large dose. Had this been the case, I should have expected to have found some morbid appearances indicative of the irritant nature of the drug. It appears to me more probable, from the amount found in the body, that it must have been taken in a succession of doses, not great enough individually to produce local irritant effects, but amounting in the aggregate to a large quantity. It is right, however, to add that a single copious dose, not large enough to produce marked local effects, might give rise to fatal depression of the system in a woman aged 71, whose heart was enlarged and somewhat dilated.

"'4. That, from the fact that antimony was found copiously in the liver, was readily detected in the blood, and existed to the amount of a quarter of a grain in the stomach, some at least of the tartar emetic had been taken probably within a few hours before death.

"'5. That, from mere chemical investigations, I am unable to say over what length of time the administration of the antimony had extended, supposing it, as I believe, to have been taken in a succession of doses. This can be learned only from a consideration of the history of the case, with which I am unacquainted.'

"Here, again, Prof. Penny's experiments upon portions of the body completely confirmed those of Dr. Maclagan.

"Several articles taken from the prisoner's house were submitted to analysis by Prof. Penny. In a paper package containing 2,850 grains of tapioca the presence of antimony, in the form of tartar emetic, was unequivocally detected. Its amount was found to be equal to 4·62 grains in the pound of tapioca. Not a trace of mercury was detected. A bottle containing one ounce and five drachms of a dark-brown liquid, having the odor and general appearance of Battley's solution of opium, was found to contain an appreciable quantity

of antimony in a soluble form. The amount was equal to 1-5 grain per fluid ounce of liquid. It contained no mercury.

"The other articles which might be supposed to bear upon the case were:—A mixture of tartarized antimony and arsenious acid, in equal proportions by weight; two separate portions of tartarized antimony; a lump of opium; and small quantities of calomel, of aqueous solution of corrosive sublimate, and of the tinctures of aconite, conium and digitalis. Some cheese and a second package of tapioca were tested for antimony and mercury, but no evidence of the presence of these metals was obtained.

"Prof. Penny's evidence respecting the contents of the bottle found in Mrs. Taylor's pocket after death was most important. Suspecting the presence of some other poison besides antimony in the Battley's solution, he instituted further experiments, and succeeded in obtaining tolerably clear evidence of the presence of aconite. He detected the latter poison by applying an extract, obtained by evaporation, to his tongue, when it produced the tickling and benumbing sensation characteristic of aconite. A further portion was treated with ammonia and diluted hydrochloric acid, on the evaporation of which it produced the same sensations strongly and distinctly. He had added ten per cent. of Fleming's tincture of aconite to Battley's solution, which produced the same sensations very much stronger. He concluded that the solution given to him for examination contained more than five and less than ten per cent. of tincture of aconite. Witness then described a series of experiments made by him on rabbits with Battley's solution, as purchased by him in various places in Glasgow and London, with the solution with tincture of aconite added by himself, and with the mixture under consideration. The various preparations had been injected under the skin of the back of the rabbits, between the skin and muscles. With the genuine Battley the rabbits assumed a prone position, resting on belly and chest, and the head resting on the ground. The fore-legs were either sprawling or gathered under the body, the hind legs being extended sideways; the eyes remained open, and the pupils were natural and not contracted. The breathing was invariably gentle; no cries were uttered; no convulsions or spasms of the body were apparent. There was a complete condition of inanity; and, with the exception of the open state of the eyes, the animals seemed to be in a state of perfect sleep. In this state the animals remained for several hours, and then gradually recovered. The effects produced upon the animals by Battley's solution containing aconite presented a striking contrast to the symptoms resulting from pure Battley. Soon after the injection the animal became restless and uneasy, and then began to crouch, resting on its flank, the hind legs extended laterally, and keeping its head erect. It next assumed the sitting posture, in an attitude of watchful expectancy, and commenced to twitch its lips and move its jaws, as if chewing. Suddenly it staggered and reeled over, quickly regaining its feet; saliva began to flow from the mouth, and soon after piteous and peculiar choking cries were emitted. The head was retracted, and the breathing was painfully laborious. Convulsions now set in, followed by intervals during which the limbs were quite relaxed; and the animal lay helpless on its side. Frantic leaps were now taken. A state of utter prostration then occurred, variable in duration; and then a strong

convulsion came on, during which, or immediately after, the animal expired, the limbs becoming instantly relaxed. The results produced by this bottle corresponded in every respect with the effects produced by the above mixture, and were so closely similar that it was impossible to detect any essential difference between them. In the case of the small rabbits, the experiments were made at the same time; and without knowing beforehand, it would not have been possible to distinguish the animal under the influence of this Battley from the one under the influence of the mixture of Battley and the aconite. These results left no doubt in his mind, joined with the sensations, that that bottle contained aconite. All the other experiments, which were numerous and varied, confirmed these results.

"After hearing Prof. Penny's evidence, the Court recalled Dr. Maclagan, who stated that, although he had attributed Mrs. Taylor's death to the effects of antimony, he was inclined to think that her last symptoms might have been produced by aconite. The falling head, the almost imperceptible breathing and pulsation, and the torpid condition of the brain, were indications such as would have resulted from aconite; but aconite, like most poisons, varied a little in the effects it produced on different individuals. Still, these were symptoms likely to have been produced by aconite. Antimony passed pretty rapidly out of the system by vomiting and purging, weakening and ultimately destroying the patient. Opium might lessen the tendency to vomit, but a pernicious effect on the muscular tissue would remain. He had never known a patient under the influence of aconite and antimony at the same time; but if opium, aconite and antimony were administered so as to be operating at the same time, the symptoms which Mrs. Taylor had exhibited were such as he would have anticipated, because aconite, being the most powerful, would predominate. There was nothing in her symptoms to indicate apoplexy.

"The evidence of the chemists who supplied Pritchard with his drugs, cannot fail to be interesting to the readers of this journal.

"John Campbell, manager of the Glasgow Apothecaries' Company's branch in Sauchiehall Street, said the prisoner had a running account with that establishment, and read entries proving the purchase by him of several quantities of tincture of aconite, tartarized antimony and other poisons. On three occasions he had obtained one ounce of tincture of aconite, and on two occasions one ounce of tartar emetic. Witness deposed that one ounce of tartarized antimony was an unusual quantity to sell. Two grains was the ordinary dose for an emetic, and the ounce contained 435½ grains. He had never sold an ounce of tartarized antimony to any other medical man in Glasgow, and the quantity purchased by the prisoner struck him. Two ounces would serve their business for twelve months, and they had a very large dispensing business. The quantity of aconite purchased was also unusual, and one or two ounces of it would cover all they sold of it in a twelvemonth. The prisoner had also purchased a very large quantity of chloroform—132 ounces between July and December, which exceeded all their sale to other persons. Witness had been a dispensing apothecary for twenty-three years, and had never sold so much poison to any medical man. Indentified several vials produced.

"In addressing the jury for the prisoner, Mr. A. R. Clark combatted the arguments by which the Crown counsel had endeavored to

prove that a medical man had been the murderer. The learned counsel concluded his address with a pathetic appeal for a verdict of acquittal. This appeal, as our readers are aware, did not counteract the effect of the evidence brought forward by the counsel for the Crown, and the jury returned a unanimous verdict of *guilty* on both charges. The Lord Justice Clerk sentenced the prisoner to be executed at Glasgow on the 28th of July."

Dr. Phinkas J. Horwitz, of Pennsylvania, has received the appointment of Chief of the Bureau of Medicine and Surgery in the Navy, *vice* Dr. William Wheelan, deceased. Dr. Horwitz has long been connected with the Navy, and has been a popular and efficient officer in the service.—*Med. and Surg. Reporter.*

It is stated in the report of Dr. R. M. Girvin, that during last year there were treated in the Blockley (Philadelphia) Hospital 5815 cases; 3455 of which were cured and 532 died, and 555 remained in the wards. A large number of patients have also been prescribed for in the out-wards. Five hundred and twenty-eight cases were treated in the female venereal wards.—*Med. News.*

At the annual commencement of the Long Island College Hospital Medical School, held in Brooklyn on the 29th of June, the degree of M.D. was conferred on 52 candidates.

Dr. John B. Biddle has been elected Professor of Materia Medica and General Therapeutics in the Jefferson Medical School.

The entire value of the estate of the late Dr. Valentine Mott is stated to be $400,000. His anatomical museum goes by his will to the New York Medical College.

The twenty-sixth annual circular and catalogue of the Baltimore College of Dental Surgery for session 1865–66 has been issued. This is the oldest dental college in the world. Notwithstanding the unfavorable circumstances with which it has been surrounded for the last four years, it is in active operation, exercising great influence for good upon the profession.—*Dental Register of the West.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 5th, 1865.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week - - - - - - -	65	62	127
Ave. mortality of corresponding weeks for ten years, 1853—1863,	56.4	54.3	110.7
Average corrected to increased population - - - - -	00	00	120.64
Death of persons above 90 - - - - - - - - -	0	1	1

Deaths in Boston for the week ending Saturday noon, Aug. 5th, 127. Males, 65—Females, 62. Accident, 4—apoplexy, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 2—bronchitis, 2—cancer, 2—cholera, 2—cholera infantum, 15—cholera morbus, 1—consumption, 19—convulsions, 5—cyanosis, 2—debility, 1—diarrhœa, 7—dropsy, 2—dropsy of the brain, 2—dysentery, 15—erysipelas, 1—typhoid fever, 2—gangrene, 1—disease of the heart, 2—infantile disease, 2—jaundice, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 1—measles, 1—neglect, 1—old age, 2—premature birth, 2—puerperal disease, 1—scrofula, 1—sunstroke, 3—teething, 2—tetanus, 1—unknown, 9—whooping cough, 2.

Under 5 years of age, 56—between 5 and 20 years, 10—between 20 and 40 years, 28—between 40 and 60 years, 24—above 60 years, 9. Born in the United States, 78—Ireland, 41—other places, 8.